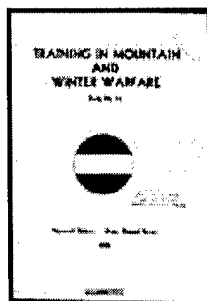


The Army Ground Forces

TRAINING FOR MOUNTAIN AND WINTER WARFARE

Study No. 23



By Capt. Thomas P. Govan

Historical Section - Army Ground Forces 1946

HEADQUARTERS ARMY GROUND FORCES

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SUBJECT: Studies in the History of Army Ground Forces

TO: All Interested Agencies

1. The history of the Army Ground Forces as a command was prepared during the course of the war and completed immediately thereafter. The studies prepared in Headquarters Army Ground Forces, were written by professional historians, three of whom served as commissioned officers, and one as a civilian. The histories of the subordinate commands were prepared by historical officers, who except in Second Army, acted as such in addition to other duties.
2. From the first, the history was designed primarily for the Army. Its object is to give an account of what was done from the point of view of the command preparing the history, including a candid, and factual account of difficulties, mistakes recognized as such, the means by which, in the opinion of those concerned, they might have been avoided, the measures used to overcome them, and the effectiveness of such measures. The history is not intended to be laudatory.
3. The history of the Army Ground Forces is composed of monographs on the subjects selected, and of two volumes in which an overall history is presented. A separate volume is devoted to the activities of each of the major subordinate commands.
4. In order that the studies may be made available to interested agencies at the earliest possible date, they are being reproduced and distributed in manuscript form. As such they must be regarded as drafts subject to final editing and revision. Persons finding errors of fact or important omissions are encouraged to communicate with the

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errors of fact or important omissions are encouraged to communicate with the Commanding General, Army Ground Forces, Attention: Historical Section, in order that corrections may be made prior to publication in printed form by the War Department.

BY COMMAND OF GENERAL DEVERS:

J.L. TARR
Colonel, AGD
Acting Ground Adj General

1 Incl:
Historical Study

TABLE OF CONTENTS

The Problem and Initial Plans

Tests and Training in Winter Warfare 1940-41

Plans for Training in High Mountains 1940-41

Initial Program of Training in High Mountains

Organization and Training for Mountain and Winter Warfare under the Army Ground Forces

Training at Camp Carson and Camp Hale - 1942-43

Mountain Training in West Virginia

The Formation of the 10th Light Division (Alpine), 1943

Termination of Mountain Training

References

PREFATORY NOTE

This general study of the experiments in mountain and winter warfare training from 1940 to 1944 is designed as an introduction to the histories of the Mountain Training Center and The 10th Mountain Division and to the numerous technical reports by the units involved. Its purpose is to trace the development of mountain and winter warfare training from its inception in 1940 to its termination, as far as Army Ground Forces was concerned, in 1944, and not to give a detailed or technical account of the problems involved.

Considerable controversy attended the decisions of the War Department concerning mountain and winter warfare. This study has been confined to an account of the actual decisions and the reasons for which they were made.

The Problem and Initial Plans

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The Problem and Initial Plans

The training problem of the Army of the United States on the eve of World War II was probably more complex than that of any other army. The potential enemies of the United States were all distant and across oceans. Invasion of this continent was possible but not probable in the years before 1940. War, if it came, seemed more likely to be fought in one of the regions of the world into which American interests had penetrated and come in conflict with those of other nations' rather than within the continental limits of the United States. The General Staff, in its planning for war, had to confront the possibility of military operations in many areas and under varied conditions of weather and terrain.

The majority of troops of a great power in the modern world must be trained for standard operations in the settled regions of the temperate zones. Most countries with potential enemies separated only by land frontiers knew what abnormal conditions of terrain and weather might be encountered by their armies and could prepare special troops for such employment. The United States could not know this definitely and specifically. Its small regular army had neither the men nor the appropriations for the specialized units which might be required if and when the nation engaged in war with one or more of its potential enemies in one of the many possible theaters of operation.

The beginning of the European war in 1939 and the simultaneous expansion of Japanese power in southern Asia brought war much closer to the United States. After the first surprising demonstration of German power in Poland the war settled down into a period of inactivity. As American newspaper readers became bored with the war in December 1939 a new conflict broke out between small Finland and the giant Soviet Union. The Finns, instead of being overwhelmed as most observers expected, surprised the world with the tenacity and effectiveness of their resistance. Ski troops, clothed in white to mask their moves, disrupted Russian supply columns and won victory after victory.

Those initial victories of the highly specialized Finnish winter troops aroused the interest of American political and military leaders. On 6 January 1940, Louis Johnson, the Assistant Secretary of War, asked General Marshall what consideration the General Staff had given to the subject of special clothing, equipment, food, transportation and other essentials necessary for an effective field force under conditions approximating those of the campaigns in Finland and Northern Russia.¹

Three weeks later The Chief of Staff replied that operations of this nature had been under continuous study in connection with the problem of the defense of Alaska. Winter training had also been conducted annually by troops stationed in severe climate and had been especially successful at Fort Snelling, Minnesota, where some of the men had become highly skilled in the use of skis. "It is my intention," General Marshall added "to continue, accelerating where practicable, tests of food, clothing, equipment and transportation in order to standardize for the purpose the types best suited to operations under severe winter conditions. The campaign in Finland is being studied and should be of considerable assistance. Winter maneuvers, on a larger scale than yet attempted are desirable, but to date funds for this purpose have not been available."²

The expansion of the Army and the increased appropriations in 1940 provided the necessary and money for specialized training but other handicaps could not be so readily overcome. The National Guard was inadequately trained when called into Federal Service. The reserve officers were far from prepared to command and train troops and the great majority of the selectees had no military training at all. The primary objective of the new army was necessarily the creation of an adequately prepared officer group and the basic, normal training of individuals for standard units.³

The decision to concentrate primarily on the training of standard units for operations under average conditions of weather and terrain was adopted reluctantly. The history of the first World War, as well as the reports from the Russo-Finnish War, indicated the importance of divisions fully trained to conduct operations in winter. "In view of the speed which has

divisions fully trained to conduct operations in winter. "In view of the speed which has characterized European operations to date" a War Department G-3 memorandum stated, "no theater for the employment of American troops can be dismissed from consideration as fantastic. While it appears improbable at the moment, it is conceivable that our ability to fight in winter terrain might be of mayor, even decisive importance. Obviously the desirable training objective is the immediate creation of divisions fully equipped and highly trained for this type of war. In view of the actualities of our situation, it is necessary that we begin this training on a small, more honestly' on an inadequate scale, but we can at least take the first steps to prepare for operations of this type."⁴

Preliminary plans for an extensive and systematic testing program for winter warfare were prepared in the spring and early summer of 1940. The Command and General Staff School was charged with the preparation of a circular for the information and guidance of units to be trained in snow and extreme cold. A week later, 6 August, the chiefs of each of the arms and services were directed to initiate experiments to ascertain what changes in transport, material, equipment and clothing were necessary for winter operations and to submit a preliminary report not later than 1 September.⁵

The War Department plans for the winter testing program were completed as the recommendations from the arms and services came in. Each of the supply branches was directed to conduct laboratory tests of materiel and equipment using the cold chambers at Aberdeen Proving Grounds, Wright Field and the Bureau of Standards. The Alaska Command was designated as the principal field testing agency. The laboratory tests could be used to eliminate certain articles from future consideration, but no item to be adopted for use until the actual military value had been ascertained by field test under conditions of extreme cold. To facilitate these field tests the commanding general of the Alaska Command functioned both as a chief of a supply arm or service for the development of new equipment and as a chief of a using arm or service for the testing of equipment developed by the service branches.⁶ The Air Corps and the Cavalry were authorized to conduct their own tests and experiments because of the peculiar technical requirements of each of these branches.⁷

Tests and Training in Winter Warfare 1940-41

Additional tests and experimental training were to be conducted by those divisions within the continental United States whose normal posts provided adequate weather and snow conditions. A special test officer for the 5th Division was named by the Chief of Infantry and this division was selected as the principal unit for winter training. Its schedule called for extensive battalion and patrol exercises which afforded an excellent opportunity for a practical field test of a wide variety of items of equipment and clothing. Selected individuals from the 1st, 3d, 6th, 41st and 44th Divisions were given special instruction in patrolling on skis, while winter equipment was supplied for recreational purposes to the 26th and 28th Divisions.⁸

Most of the instruction in the use of skis wee given by officers of the Regular Army, National Guard and the Organized Reserves but each commander was allotted part of a fund totaling \$12,000 for the special instruction of individuals at ski centers and for the hire of civilian instructors.⁹ The War Department also accepted the voluntary offer of the services of the National Ski Association of America to aid in the development of winter training. This association operated the National Ski Patrol composed of over three thousand skilled skiers trained for winter rescue work. Members of the association performed valuable work as instructors and gave assistance and advice concerning technical training and equipment. The Ski Patrols were also instructed to familiarize themselves with the local terrain in each of the northern regions of the United States in order that they would be prepared to act as guides for the Army and extend the antiaircraft warning and anti-parachute defense systems into comparatively inaccessible regions.¹⁰

The purpose of the winter testing and training program in 1940-41 was not to build up a combat force of ski troops, but rather to lay a foundation for future winter training. The newly expanded and untrained army could not afford such specialization when so few troops were ready for combat of any sort or under the most favorable conditions.¹¹ The reports of the Office of the Experimental Board, Alaska Defense Command, the 5th Division Winter Warfare Training Board, and of the ski patrols of the other divisions were carefully studied by the War Department G-3 and G-4 Sections with a view to setting up military characteristics of basic items so that procurement might be initiated without delay, if necessary.¹²

The patrol and battalion training reinforced the belief of the War Department G-3 that winter operations require specially trained and equipped troops. This conclusion was forcibly stated in the report of the 5th Division Winter Training Board:

The lesson is plain that preparation for winter warfare is not simply a phase of training that can be included at any northern station in divisional training but presupposes a form of warfare which requires the most careful planning, equipment and training at locations having suitable winter climate and terrain.¹³

Plans for Training in High Mountains 1940-41

While the winter training and tests were being completed the War Department was planning for the related training of troops for operations in high mountain. Surveys of possible division camp sites in high altitudes were directed on 13 December 1940.¹⁴ The War Department G-3 recommended immediate construction of such a camp all through the spring and summer of 1941.¹⁵ Reasons for this persistence were found in a G-2 report which attributed the success of the German army in the Balkans to the presence of armored and other units specifically trained for mountain operations. The British failure in Norway, on the other hand, was caused in part by having no troops trained to operate in mountain terrain.¹⁶

The War Plans Division recommended that "our military forces should be so balanced as to be able to undertake any type of operations. Our war plans are based on a large strategical reserve for operations in theaters which cannot be definitely determined at this time. W P D. is of the opinion that it may be necessary to undertake operations in mountain terrain and when such operations are undertaken, at least a Division trained in mountain warfare should be available for this purpose."¹⁷

Additional evidence of the need for specialists in mountain and winter warfare was found in the report of the United States military attache in Italy who wrote of the Italian divisions in Albania: "The divisions were not organized, clothed, equipped, conditioned or trained for either winter or mountain fighting. The result was disaster ... An army which may have to fight anywhere in the world must have an important part of its major units especially organized, trained and equipped for fighting in the mountains and in winter. The army and equipment must be on hand and the troops fully conditioned, for such units cannot be improvised hurriedly from line divisions."¹⁸

Information that the Germans were training special mountain troops for use in Alaska and in the Canadian and American Rockies also came to the War Department in July from the American minister in Switzerland. His informant, a German citizen, stated that one of the principal objectives of the German campaign in the Soviet Union was the establishment of a bridge to Japan and the Vladivostock-eastern Siberian area from which war could be carried to the United States.¹⁹

These reports from varied sources demonstrating the need for specialized training in mountain warfare and the possibility that mountain troops might be needed by the United States were reinforced by pressure on the War Department from the interested civilian

States were reinforced by pressure on the War Department from the interested civilian officials of the National Ski Association and the American Alpine Club. These patriotic men were highly skilled in ski and mountaineering techniques, but their natural interest and enthusiasm caused them to ignore many of the difficulties which stood in the way of such specialized training.²⁰

General Marshall seems to have been convinced from the beginning that special training was necessary for operations in winter and in high mountains. He also recognized the possibility that the United States might require such specialists in the event of war. But he was confronted with a very complex problem. Shortages of equipment, inadequate training aids and facilities, and poorly prepared commissioned and noncommissioned instructors were preventing the full accomplishment of the planned training program. The Congress of the United States was debating whether or not to extend the term of service of the selectees and National Guard past the single year originally authorized. Large numbers of influential people were attempting to prevent any further expansion of the armed forces and, as the Chief of Budget and Legislative Planning Branch reported: "It is becoming increasingly difficult to explain to the Bureau of the Budget and the Congress why duplicate housing must be provided for large installations or units for which housing has previously been provided ... It is the opinion of the Budget and Legislative Planning Branch that no additional funds for construction of new housing for the present strength army should be requested unless an urgent National Defense requirement demands such a request."²¹

General Marshall, on 5 May, decided not to request additional funds for new housing in high mountain terrain. He ordered surveys to be made for a mountain division camp in the vicinity of West Yellowstone, Montana and Pando, Colorado, so that full information would be ready if there was a further augmentation of the Army. He also recommended that a school or test force be established in high altitudes for the training of selected personnel in order to have a trained nucleus in case of eventual need.²²

General Marshall's reluctance to begin mountain training on a division scale was strengthened by a recommendation from Lt. Gen. Lesley J. McNair, Chief of Staff, GHQ. General McNair was opposed to the organization of a special mountain division unless the need for such a unit was definitely foreseen. He recommended "that efforts for the present be directed toward the development of an infantry battalion and an artillery battalion, capable of operating effectively in mountainous terrain and containing a minimum of pack transportation and a maximum of motor transportation."²³

War might come at any moment either in Europe or Asia. The 1941 maneuvers were demonstrating what the high officers of the army already knew -- that the Army of the United States was not ready for combat anywhere or under any conditions. Convinced advocates of air power, armor and mechanization were urging specialization upon an army that was too small and inadequately equipped for standard operations. Mountain troops, under such conditions, were a luxury that could not be afforded unless there was a reasonable certainty that they would be required.

A small force in high altitudes would continue the tests of materiel, clothing and equipment for cold weather operations which had been initiated the preceding winter. Necessary information would be accumulated about the problems of training under such conditions' and a small group of highly skilled personnel would be available as instructors if later the mountain training program was expanded.

Initial Program of Training in High Mountains

This limited program was inaugurated on 15 November 1941 by the activation of the Mountain and Winter Warfare Board and a reinforced battalion of the 87th Mountain Infantry' commanded by Lt. Col. Onslow S. Rolfe, at Fort Lewis, Washington. These organizations were later joined by a battalion of pack artillery. The original personnel were men with previous mountaineering or ski experience already in the army. Additional

men with previous mountaineering or ski experience already in the army. Additional volunteers-were recruited by the National Ski Association 24

The aid given by this association in regard to equipment and technical training had proved so valuable that on 1 March 1941 a formal contract was drawn between it and the War Department-calling for the continuation of these activities. With the activation of the mountain troops the contract was broadened and one of the principal duties of the National Ski Association became the selection and recruiting of highly specialized personnel with qualifications as skiers and mountaineers.²⁵

The original directive for the mountain troops and the Mountain and Winter Warfare Board was in general terms. No one knew when, where or how many mountain troops might be needed. General Marshall's proposed school or test force had been expanded into General McNair's recommendation of a task force composed of an infantry and a pack artillery battalion. But Colonel Rolfe did not know whether his mission was the training of skilled specialists to be used as cadres and instructors for larger units, or the preparation of a task force to be used in combat. Neither GHQ, the Western Defense Command, nor the IX Corps, the three echelons of command between the War Department and the mountain troops, had the time nor the necessary knowledge properly to supervise mountain training or to render effective aid to Colonel Rolfe.

The attack by the Japanese on Pearl Harbor, twenty-two days after the activation of the mountain troops, absorbed the energies and attention of the War Department G-3 Section which had been the driving force behind mountain training. The possible areas of combat were not such as to indicate that mountain troops needed to be given the same urgent priority as was necessary for armored divisions, tank destroyer battalions or amphibious training. Colonel Rolfe was left to work out his problems as best he could in the first few months after Pearl Harbor.

Colonel Rolfe had no previous knowledge or experience in winter or mountain warfare. The four Regular Army officers assigned to his command had each had some training in winter operations or with pack animals but none was a skilled or trained mountaineer. The enlisted men, recruited by the National Ski Association, had considerable knowledge of civilian ski and mountain techniques but no military knowledge. The first few months were occupied with the problems of organization, basic military training, and making preparation for specialized winter and mountain training. Fort Lewis, in the lowlands of western Washington, did not have sufficient snow for skis, nor was it high enough for mountain work. The nearest suitable location was Mount Rainier, sixty-two miles away over paved and sloughed highways. Paradise Lodge and Tatoosh Lodge, large two-story hotels five thousand feet up on the slope of Mount Rainier, were rented from the National Park Service for the period February to June 1942. During this period each of the mountain units was given two months of intensive ski training by a group of instructors which included many of the famous skiers of the United States. When not engaged in ski training the units continued normal individual and unit training with the modifications necessary because of operations in snow and mountain terrain.²⁶

Organization and Training for Mountain and Winter Warfare under Army Ground Forces

The War Department was reorganized on 9 March 1942 and the training of all ground troops within the continental United States was turned over to the Army Ground Forces, the successor of GHQ. Various plans were suggested for the continuation of mountain training involving the activation of one or more divisions but shortages of men and equipment continued to make them unacceptable. By 20 April it was definitely decided to continue the test force principle through the winter of 1942-43 and to postpone the activation of a mountain division until the spring of 1943.

Contracts were let for the construction of Camp Hale' nine thousand feet above sea level at Pando, Colorado.²⁷ The 87th Mountain Infantry Battalion was expanded to a regiment at Fort Lewis through the recruiting of qualified mountaineers and skiers by the National Ski Association and by the transfer of qualified men from other units of the Army with the approval of Colonel Rolfe. The four pack artillery battalions, which had been assigned to mountain work, were combined as the 89th Mountain Artillery, and a cavalry reconnaissance troop was formed from the 4th Cavalry which had already had some experience in winter warfare training.²⁸

Originally it was planned for the commanding general of the 89th Division scheduled for activation at Camp Carson, Colorado, to control mountain training at Camp Hale' and for selected units of that division to be sent to Pando during the winter for test of training and equipment. But this plan was abandoned and on 24 July the Army Ground Forces recommended that Mountain Training Center be activated at Camp Carson, prior to the completion of construction at Camp Hale, to take command of the Mountain units during the testing period before the activation of a mountain division. ²⁹

The War Department G-3 Section was much concerned over the lack of trained mountain troops. A memorandum for General McNair stated: "Our present program has been subject to delays and interruptions with the result that we are not prepared to furnish promptly any troops trained for mountain operations. In view of the possible demand for mountain trained troops in the near future, recommendations are requested as to possible plans for meeting this need."³⁰

General McNair did not share the anxiety of the War Department. He believed that the existing plans were sufficient and reported: "The approaching winter will be utilized to the utmost to develop organizations clothing and equipment' suitable for winter operations in mountainous terrain. In the absence of an emergency need for such troops overseas it seems logical to work initially with the several types of units which would make up a division, without attempting to organize a complete division." In conclusion he added, "The development of ... mountain ... training in this country is believed to depend primarily on the urgency of the need. The strategic demands in this connection are far from clear to this headquarters."³²

This disinclination to engage in extensive specialized training unless there was a demonstrated need was characteristic of General McNair. He expressed similar objections to War Department recommendations for Jungle training in the United States. In protest against this additional specialization Headquarters, Army Ground Forces wrote: "We are already engaged or directed to engage in special training in amphibious' desert' mountain, airborne, assault, and winter warfare. It is desirable that units receive such type of special training only when the special operations can be foreseen with reasonable certainty. Standard training invariably suffers when any type of special training is undertaken "³³

Training at Camp Carson And Camp Hale - 1942-43

The Mountain Training Center was activated on 3 September 1942 at Camp Carson, Colorado, under the command of Colonel Rolfe. Pack artillery, signal, medical, quartermaster, engineer, ordnance, military police, antitank and antiaircraft units were activated along with headquarters company. Two battalions of the 87th Mountain Infantry and Battery "A" Reinforced of the 99th Field Artillery Battalion remained at Fort Lewis preparing to move on 15 November to the Hunter Liggett Military Reservation in California for a period of two months. Their mission was to conduct the necessary experiments and test "to determine the proper training techniques and the most essential combat equipment, transport and organization necessary for elements of a standard division to operate under combat conditions in mountains, thick woods, heavy undergrowth' and primitive

roadnets."34

The remainder of the Mountain Training Center moved to Camp Hale at Pando on 16 November. On 26 November the 1st Battalion of the 86th Infantry was activated. One month later the mountain troops which had performed creditably in the test maneuvers at Hunter Liggett arrived at Camp Hale and the Mountain Training Center was ready to begin training with its full personnel.

As the Mountain Training Center was getting organized at Camp Carson and Camp Hale a detachment of 10 officers and 16 enlisted men was sent in October to Camp Edwards, Massachusetts and from there to Lincoln, New Hampshire. Its mission was to instruct certain personnel of the 36th Infantry Division in the fundamentals of assault rock climbing and elementary mountaineering. These men in turn began teaching their newly acquired skills to the remainder of the division under the supervision of the group from the Mountain Training Center.³⁵

After the completion of this mission the trained instructors from the Mountain Training Center were ordered to report to Camp McCoy, Wisconsin where they were joined by an augmentation group of 20 officers and 80 enlisted men. The War Department had decided to resume division winter training after a lapse of one year. Neither the time nor the troops had been available in the winter of 1941-1942 for such training, but tests of winter clothing and equipment had been continued by the Mountain and Winter Warfare Board and by the 87th Infantry Regiment.

The 2d Infantry Division, the 602d Tank Destroyer Battalion and the 456th Coast Artillery Battalion (AA)(AW) were selected for winter training. The detachment from the Mountain Training Center directed the instruction in snowshoeing, skiing and winter campaigning and the commanding officer of the Mountain Training Center was designated as an agent of Headquarters, Army Ground Forces for the purpose of inspection, instruction and training in winter-warfare and of determine progress of tests of equipment.³⁶

After preliminary training in the use of skis and snowshoes and introductory instruction in the problems of operations in deep snow and extreme conditions of cold, the division and attached units engaged in winter maneuvers. These larger and more extensive operations bore out the conclusions drawn from the battalion exercises of the 5th Division in 1940-1941. Troops of whatever background who have arrived at the combined phase of training can be adapted to techniques and conditions of winter warfare with relatively small changes in equipment. But winter operations require long and careful planning and should never be undertaken without special training and equipment.³⁷

Meanwhile the Mountain Training Center at Camp Hale was beginning the training of its varied units. Many of the fillers sent to the newly activated organizations came directly from reception centers and had to be given basic training before undertaking any specialized ski or mountain training. As the new recruits received their basic training the older soldiers were attending ski and snowshoe classes and beginning to learn how to care for themselves under mountain conditions.

The Army of the United States still had no definite plans which required the use of troops trained for operations in high mountains. As General Rolfe said in March 1943, "We don't know whether we'll be sent to Norway, Russia, Burma, or the Italian Alps -- and each area presents different problems that demand ultra-specialized training. It's physically impossible with the time and facilities on hand to train men for combat in all these areas. We'll have to go ahead on a compromise basis."³⁸

The indefiniteness of the mission combined with the lack of mountain and winter experience among the high ranking officers and the inadequacy of supervision by higher headquarters were having their effect on the Mountain Training Center. Training was

confused and inadequate. Each staff officer has too much to do (the G-3 of the Mountain Training Center for Pie was also the Executive Officer of The Mountain and Winter Warfare Board) and the steady stream of new men, some with several years of army experience and others direct from reception centers, further disrupted the unit training programs.

The battalion maneuvers of the 87th Infantry in February 1943 were a miserable failure. So adverse were the comments of AM observers that General McNair wrote the following letter to General Rolfe

1. Recent observations of activities of your command made by members of this headquarters are forwarded for your information and such action as you desire.
2.
 - a. The winter training did not appear to be adequate to condition personnel for marching and maneuvering under conditions of extreme cold and adverse weather conditions.
 - b. Members of Brats did not appear to have had sufficient instruction in the use of special winter clothing and equipment to obtain the maximum value of their characteristics.
 - c. March discipline of units appeared slack. A high percentage of the personnel fell out due to sickness' fatigue, frostbite, and fear.
 - d. Men were overloaded to such an extent as to reduce mobility to a minimum and cause unnecessary fatigue and hardship.
 - e. In bivouac, uniformity of snow camping technique was lacking, indicating a lack of preliminary instruction.
 - f. Training programs indicated a lack of planning to provide frequent overnight exercises necessary to properly condition men for winter maneuvers of extended duration.
 - g. Morale seemed lower than should be expected due to an abnormally high morbidity rate attributed to: (1) Smoke pall. (2) Altitude (3) Lack of recreational facilities (4) Lack of confidence in the training program.
 - h. The large proportion of experienced woodsmen, mountaineers, guides and trappers in the enlisted and lower commissioned grades provides an excellent source of technical knowledge. This source should be used to the utmost in the development of instructional training technique which is founded on time-tested mountain and winter procedures.
 - i. Individual prejudice and theories appeared to have biased many echelons of the Mountain and Winter Warfare Board. Fair comparison has not been used in testing equipment and developing techniques.
 - j. Insufficient liaison existed between the Air Force unit conducting air supply tests and officers of your staff. The result was an incomplete understanding of mutual problems and limitations in supply by air.
 - k. Artillery firing conducted under difficult conditions was excellent.
3. It is recognized by this headquarters that your command has recently undergone a large expansion and that the entire project is in a continuous state of development and expansion. The comments in this letter are offered constructively. This headquarters stands ready to assist in remedial action of any matters beyond your control.³⁹

Mountain Training in West Virginia

While General Rolfe was making the changes in the mountain training program necessitated by the failure of the battalion maneuvers and General McNair's letter the Mountain Training Center was given another task. The 36th and 45th Infantry Divisions were being prepared in the United States to participate in the planned invasion of Sicily. This invasion required special training in amphibious warfare and for operations in the mountainous terrain and over the primitive road network of the interior of Sicily. A maneuver area was established at

Buena Vista, Virginia with officers and enlisted men from the Mountain Training Center as instructors. Regimental combat teams of each of the divisions were given five days of preliminary exercises to accustom them to movement over rugged mountainous terrain, and they then participated in free, two-sided maneuvers under simulated combat conditions. While the majority of the troops were engaged in organizational training selected individuals consisting of from five to ten men from each rifle company, one artillery liaison detail from each light artillery battalion and five men from each regimental intelligence platoon were given technical rock climbing instruction.⁴

The mountain training of the 36th and 45th Divisions proved effective and was of great aid to them in their operations in Sicily. The Army Ground Forces decided to continue this training for each of the divisions assigned to the XIII Corps for post-maneuver amphibious training. While one of the regimental combat teams was being trained in amphibious operations, another would be engaged in maneuvers in low mountains. The maneuver area was moved from Buena Vista, Virginia to Elkins, West Virginia, and the instructor group from the Mountain Training Center was continued. From 2 August 1943 to 1 July 1944; regimental combat teams from the 28th, 31st, 77th, 35th and 95th Infantry Divisions were given practical experience in maneuvering in mountainous terrain Just prior to their departure overseas. Selected individual's were also trained in rock climbing in order that each organization would have trained climbers for use as observers for artillery and infantry and to emplace infantry weapons in commanding positions. Qualified snipers and scouts could thus Bet into difficult positions and also, by means fixed ropes and artificial aids, prepare routes for regular troops over terrain which ordinarily would be impassable.⁴

The training given at the West Virginia Maneuver Area introduced standard units to some of the problems which they would encounter in combat in difficult terrain, but no attempt was made to transform these units into mountain troops or to fit them for operations at high altitudes. The strategic plan in 1943 apparently did not contemplate operations in areas where the specialized skills of trained mountain troops would be essential. But events were moving so rapidly that no one could yet say that such specialists would never be needed and high altitude training was continued.

The Formation of the 10th Light Division (Alpine), 1943

The spring of 1943 was the date set for the activation of a mountain division. But AGE planning for the activation of this division was complicated by War Department interest in the formation of special Jungle divisions. On 18 September 1942 General McNair wrote:

It appears that there is an interrelation between divisions suitable for use in mountain terrain and those suitable for Jungle terrain. Both preclude the use of the mass of heavy equipment and transport of our infantry divisions. Thus it seems appropriate to consider both mountain and Jungle divisions together, at least to the extent of using the same organization and equipment for both, so far as appropriate. ⁴²

The same memorandum contained a study of the organization of a light Infantry division to be used as the basis of either a mountain or jungle division. This proposal was discussed during the winter of 1942-43 and a Table of Organization for a light division, suitable for Jungle, mountain, amphibious, or airborne purposes, with the attachment of appropriate transportation, was prepared by the Army Ground Forces in February 1943. The division was to be flexible in composition and size and the headquarters was a compound group including other elements of proper size to form three self-sustaining combat teams.⁴³

Three light divisions were authorized in June 1943. One of these, the 10th Light Division (Alpine), was activated at Camp Hale, on 15 July 1943.⁴⁴ To form this division, two new infantry regiments one new pack artillery battalion) and one antiaircraft battalion (less one battery, were activated. Though personnel, both cadre and filler, was furnished from sources

other than the Mountain Training Center, certain units of the Center were assigned to the division. These did not include the 87th Infantry, which had left Camp Hale in June as part of one of the combat teams participating in the invasion of Kieka.⁴⁵ The training of the division at Camp Hale, and the infusion into it of elements trained at the Center, was Justified, not as being required by a definite strategic need for a mountain division, but because, as the Army Ground Forces stated, "such a step is natural and logical in the progressive development of mountain unite, and it would do a great deal for the morale of unite which have trained faithfully under trying conditions and now seek indications that they eventually will participate in active military operations."⁴⁶

The new division had the dual mission of testing the organization and equipment best suited to the employment of a division in high mountain warfare and the attainment of combat efficiency for operations in such terrain. It wee to be trained to operate primarily in mountains and primitive terrain where road nets were poor or nonexistent and under adverse and extreme weather conditions.⁴⁷

Termination of Mountain Training

The Mountain Training Center and the 10th Reconnaissance Troop were continued as independent organizations to maintain a group of officer and enlisted specialists in mountain and winter techniques for use as instructors separate and apart from the division. The Mountain and Winter Warfare Board was also continued as the testing agency for mountain and winter equipment, materiel and clothing.⁴⁸

The officers and enlisted men acting as instructors at the West Virginia Maneuver Area were assigned to this group but continued on detached service until 15 March 1944 when they were transferred to the XIII Corps which directed maneuver training in that area.⁴⁹ Other officers and enlisted men from this pool of skilled instructors were sent on a special mission with the British in Syria; another group was sent to a maneuver area in Canada for work with Canadian and British troops' and a third to open a school and maneuver area in the Matese mountains of Italy.

The principal missions of those remaining were the instruction of the 10th Light Division in mountain techniques and preparation of the 76th Infantry Division for winter training at Camp McCoy.⁵⁰

The Mountain Training Center and the 10th Reconnaissance Troop were continued as independent unite to maintain a group of specialized instructors in mountain and winter techniques. Special schools were also conducted for the training of drivers and maintenance personnel for the M 29 Cargo Carriers for each of the divisions and for a selected group of British officers and enlisted men who came to Camp Hale in December 1943. Another special mission wee the instruction of approximately one hundred men from the Office of Strategic Services in the use of skis and the techniques of living in the open under severe conditions.⁵¹

Each of these missions was accomplished effectively. The mountain troops of the United States had successfully mastered most of the problems of mountain and winter training. They knew how to operate in difficult terrain and under extreme conditions of weather and how to instruct others in these techniques. If such troops were needed by the Army of the United States they could be prepared rapidly and effectively. But no such need wee apparent in 1943-44.

The Mountain Training Group at Camp Hale was inactivated and a majority of its officers and men were transferred to the 10th Light Division. The West Virginia Maneuver Area wee closed on 1 July 1944, and the Mountain and Winter Warfare Board was inactivated. A Mountain and Winter Warfare Section, added to the Field Artillery Board' carried forward

some of the experimentation in which it had been engaged.⁵² This agency and the 10th Light Division remained the only organizations under the Army Ground Forces primarily concerned with the problems of mountain or winter warfare. And for a brief interval in May 1944 a possibility existed that this division would be converted into a standard infantry division.

The 10th Light Division had completed its D-Series of prescribed exercises between 26 March and 15 April 1944. All of its training had been conducted under the conditions of weather, altitude and terrain existing at Camp Hale. Temperature varied from a maximum of 39 F. on 12 April to -250 degrees F. on 28 March. Snow conditions throughout the series were such that two or three feet covered the flats at all times' while in the timbers depths of eight to ten feet were common and in places near the summits of the peaks drifts forty to fifty feet deep were encountered. The D-Series exercises were completed satisfactorily. The division had successfully demonstrated its mastery of tactical and administrative operations under extreme conditions of weather, altitude, and terrain. In addition to its training mission, the division had been directed to determine the suitability of the light division for operations in mountains and to test winter and mountain equipment. The results of its experience were collected in the "report on Test of Organization and Equipment of 10th Light Division."⁵³

The organization and equipment of the light division had been proved to be so unsatisfactory and the recommended changes so extensive that the Army Ground Forces wrote to the Chief of Staff to say "that the personnel and equipment necessary to correct deficiencies would approximate that necessary for conversion to a standard division." Since there would be no economy of personnel in the organization proposed' and since the existence of a special division entailed undesirable complications of personnel, equipment and supply' the Army Ground Forces recommended that the 10th Light Division be reorganized as a standard division. Combat reports from Italy had indicated that a standard division could be adapted to service in mountainous terrain with comparatively little difficulty, while it was still questionable whether a mountain division could operate effectively outside of its special mission.⁵⁴

General Marshall acknowledged that "no firm overseas requirement" had developed for the division, but he had been favorably impressed "with the organization and potential capabilities of the 10th Light Infantry Division." The Army Ground Forces was directed to make detailed recommendations for the reorganization of the division so that it could more effectively perform its mission of combat in high altitudes.⁵⁵

As the G-3 Section of the Army Ground Forces began its study of proposed changes the division itself was transferred, on 22 June, from Camp Hale to Camp Swift Texas. It was scheduled for participation in the Louisiana maneuvers in September 1944 and a period of acclimation to a low altitude and hot climate was necessary. Rumors of the possible change to a standard division had reached the division and the transfer to Camp Swift seemed to confirm the rumor. The morale of officers, non-commissioned officers' and men went into a decline, because they felt they were a picked body of men who had been selected for their specialized mountain skills and they desired an opportunity to fight as a mountain unit in mountains.

On 22 July the Army Ground Forces submitted its recommended changes to the Chief of Staff. The strength of the division was increased by 2,608 officers and enlisted men, the principal increase being in the infantry regiments. The light infantry battalion had a marked deficiency of fire-power which was remedied by the activation of a heavy weapons company for each battalion. Substantial increases were made in the engineer, signal and medical elements. Organic pack transportation was provided for all combat units of the division, increasing the number of animals from 1,707 to 6,152.⁵⁶

The proposed changes were approved by the War Department on 6 September and instructions were given to begin reorganization as soon as practicable on a tentative basis

while the T/O's and L'e were being prepared. These instructions were sent to the division on 16 September and the reorganization began at once. Cadres for the organic pack transport units in the infantry, medical, signal and engineer units were procured from the division artillery and quartermaster pack companies. Additional personnel for the heavy weapons were furnished by the Army Ground Forces. Soon men and animals began to come in daily. The absorption of some 4,000 additional pack animals and accustoming the troops to their use, was a staggering problem. The Louisiana maneuvers, in which the division was to have taken part, had been canceled because the Zone of the Interior had been largely stripped of units to meet the demands of the European theater. This respite enabled the division to absorb the added men and ants into the units, but further training of the division as a whole wee impossible. Individual, unit and specialist training had to be scheduled in all units as old men learned new Jobs and new men were fitted into the organizations.⁵⁷

The reorganization had been virtually completed when the official letter was issued which reorganized the division and redesignated it as the 10th Mountain Division.⁵⁸ The day before this letter was published, 7 November, the division was given its readiness dates. One infantry regiment was to be ready by 28 November, the second on 10 December, the third on 14 December, and the remainder of the division by 23 December.⁵⁹ Actually only one regiment, the 86th Infantry, moved separately. This regiment went to the Mediterranean theater where it was sent virtually directly into the front knee in Italy. In January the rest of the division Joined it, and the mountain troops were having their fires experience of combat in a region ideally suited for their special training.

The final evaluation of mountain and winter warfare training must wait until the end of the Japanese war, but already the successful experience of the 10th Mountain Division in the Appennines and the winter campaigns by standard trained units in France, Germany, and Italy have proved its worth. The supplies and equipment developed by experiments dating from the winter of 1940-1941, the knowledge of fires aid and physical care under extreme conditions of weather and terrain gained by the Army in winter maneuvers, all made it possible for the Army better to fight in the crucial winter of 1944-1945.

This knowledge, painfully gained by the constant and prolonged effort of devoted men, was gathered together in permanent form in two Field Manuals, published in November and December 1944, just as the need for knowledge of this specialized warfare was most acute.⁶⁰ Those men, in and out of the Army, who continuously insisted that the Army of the United States needed specialized knowledge and training for operations in winter and in mountains were proved correct. But equally correct were those in responsible positions who decided that the prime necessity of the military effort must be the rapid organization and training of standard units, which could be given the use of the knowledge developed by the specialists as it was needed.

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